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ABSTRACT

Beginning in December of 1988, and continuing through March 1989, 24 educators (20 teachers and 4 administrators) met for a series of 5 full-day sessions in the Capital Region of New York State to discuss selected themes regarding the state's high schools in the 1990s. Part of the significance of this report, which contains the results of the educators' deliberations including their observations and recommendations, rests on the fact that it came primarily from those who, on a daily basis, experience the reality of schools and classrooms. Focused on moving toward academic excellence, four sections discuss science, mathematics, social studies, and English, while an additional section reports on ideas for restructuring the secondary school organization and curriculum. The document emphasizes the interdisciplinary learning and cross-disciplinary skills that point the way toward the more sensible use of student time and proposes that knowledge be comprehensively demonstrated rather than traditionally tested. Further, the report asserts that the instrument for educational change is itself a process, not just the static culmination of a process. A list of participants and numerous black and white photographs are included. (KM)

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A VIEW FROM THE INSIDE:

HIGH SCHOOLS IN THE 1990s

Report of the Select Seminar on Excellence in Education

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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The Capital Area School Development Association
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Foreword

What do the 1989 Select Seminar Participants see in their "View from the Inside?" They are able to pierce through the haze of immediate problems and distractions to glimpse where education will be heading in the next decade. Teachers—with their consciousness of students' questions, parents' concerns, the looming, inevitable shadow of the Regents and the constant lack of time—evaluate where their disciplines stand and in which directions they need to move. Rather than lamenting about problems, these folks have peered into the future for solutions. They are schoolpeople, and they know best the necessary and the possible in schools—their collaboration should inspire other teachers to do the same.

"A View from the Inside" places an emphasis on interdisciplinary learning and cross-disciplinary skills that points the way to the more sensible use of teacher and student time. Considering alternative methods of evaluation, it proposes that knowledge be comprehensively demonstrated rather than traditionally tested. The Select Seminar participants are thinking about goals: what does it mean for a youngster to graduate from high school? What goals should we set to signify achievement? They are proposing to reshape the school day, realizing that 45 minutes "is not long enough." In short, in "A View from the Inside," they are realizing a wide range of needed changes that will drastically change the shape and meaning of schools.

The 1989 Select Seminar generated valuable thoughts. Obviously, "A View from the Inside" is a first step, the first of many, in the process of change. Change is not a destination but, like learning, forever a work in progress. Now, the seminar is well positioned to take a second step—that of sorting out the implications of these ideas, of considering the effort and effects of such a serious restructuring of the schools. The suggestions and attitude of "A View from the Inside" are not a final vision, but they are an optimistic, encouraging shift in the right direction.

Theodore R. Sizer, Professor of Education and Chairman of the Education Department, Brown University; Chairman of the Coalition of Essential Schools

Preface

Beginning in December, 1988 and continuing through March, twenty-four teachers and administrators in the Capital Region met in a series of five full-day sessions to have a conversation about the high schools in New York State in the 1990s and to write a report on the results of their deliberations including observations and recommendations related to themes and topics selected for discussion. It is our observation that practicing teachers and administrators are given at best a perfunctory role in shaping educational policy at state and national levels. It is our belief and conviction that their voices must be heard—their observations and recommendations heeded—if changes encouraged by the reform movement are to be more than cosmetic.

This seminar, which was funded by the Golub Corporation, Capital Newspapers, Freihofer Baking Company, and Key Bank NA, provided an occasion for a significant group of teachers and administrators to actively participate in discussions about the high schools in the 1990s. This report of the work of the seminar will be broadly distributed to federal and state policy makers, institutions of higher education and colleagues in elementary and secondary schools. We believe its significance will rest not only on the lucid and well-reasoned discussion embodied in its content, but on the fact that it comes primarily from those, who on a daily basis, experience the reality of schools and classrooms.

The support of the University at Albany Foundation, the Golub Corporation, Capital Newspapers, Freihofer Baking Company, and Key Bank NA, is a testimony not only to their generosity, but their recognition of our mutual interdependence.

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The Process

The CASDA select seminars follow a very simple structure based upon a set of guiding principles:

1. Participants need to commit adequate time - to work, to reflect, and to write.

Most seminars have been conducted for five full days spread about a month apart over the first three months with the final session being a two-day overnight retreat in the middle to the end of the fourth month.

2. A conducive working environment is very important.

The seminars have been conducted in "protected environments"—away from the work site, in quiet and aesthetically pleasing surroundings with special care being given to the quality of food and refreshments. We believe this clearly is a first step in communicating to participants that the seminar is special and there are high expectations that the deliberations of its members will have an important result.

3. The seminar participants are the experts.

We believe these select seminars have been highly successful in part because of the high degree of personal and professional respect afforded participants and the central belief on which the seminar series was founded: "that consciously competent teachers and administrators are the best arbiters of educational practice." While participants do extensive reading during the seminars, visiting experts and lecturers are not usually a part of this experience. The twenty-four teachers and administrators who participated in this seminar respresented many years of classroom experience. They themselves constituted the body of experts.

4. Roles are "checked at the door."

One's ideas must stand on their own, be debated, accepted, or discarded without reference to one's position, prior experience, or education.

5. Seminars are self-governing entities with organizers serving the group.

The coordination of the seminar was managed by personnel from CASDA. After providing the initial structure and on-going logistical support, they worked to transfer the governance and direction from themselves to the participants. By the end of the seminar, it is fair to say that it was self-governed with the coordinators taking direction from the seminar group.

6. The experience is at least as important as the product.

All seminar participants agree that the process, the experience, is most important; in fact, the report might be quite different if the process had continued over time, this representing but one point in an ongoing process when, although there was much agreement on important issues, there was some disagreement as well. Even so, the report provides an important documentation of the experience and serves to validate for each of the participants the energy and effort they expended.

It is also hoped that this report will provide inspiration and help to those who read it and may assist in a modest way to continue what has become a very important national conversation on teaching and school. We firmly believe such an ongoing conversation can only result in better education for all of our children.

Introduction

"Having a proper attitude toward a journey is essential. . . We must be fully involved in the **process of journeying rather than being fixated on our destination**. We are not looking for quick solutions, but we are willing to be open, precise and thorough in relating with ourselves as well as our environment. . . the only way to begin our journey is to work with confusion..."

—*Buddha*

We, the participants of the 1989 Select Seminar, found this ancient wisdom applicable not only to our seminar, but also to the philosophy and structure of education itself. We were four administrators and twenty teachers, many of whom had been nominated by their students as having a significant effect upon their education. We began in confusion, arriving on our first morning with sighs of relief after skeptically following maps into what seemed sure to be a grassy pasture. Heating our shivering selves with coffee, we slowly clustered about a large square table with tentative hellos, uncertain smiles.

Even before our introductory statements concluded, it was evident that we shared major concerns and characteristics. From the very first speaker, there was universal agreement that education needs more process and less product oriented learning. "Each year we are asked to teach more factual information and cover more topics, thus severely limiting time given to problem solving/critical thinking strategies."

"With so much emphasis on teaching for knowledge, I've seen too many teachers using nothing but multiple choice examinations..."

"How do we teach kids to think for themselves and solve problems in relation to the real world..."

"Are we teaching them accountability for themselves..."

"We are training kids - 40 minutes are up, get up, class is over - good-bye!"

"I think we need to engage students in learning. . .engage them in those things that they are learning for the intrinsic value in them..."

"We cannot within the structure that now exists properly encourage the thinking and expression of our students..."

"If we can get teachers excited about what they are doing. . . that's going to help kids get more excited about what happens in the classroom..."

We smiled warmer at this last speaker's words for we were already beginning to feel drawn together as a group. It was obvious that we shared a passion for our work. In this room, there were well over three hundred teaching years and still, even after so many trying days, weeks and months in classrooms, individuals cared deeply about their profession. We found ourselves unanimously committed to improving the educational experience of our students and ourselves.

And thus we began, our seminar structure suiting well what we later came to agree are necessary criteria for effective education. We had quality time and commitment to the task. We had the freedom to find our own way. . . that is, we began with general, open ended questions and were allowed in our small groups to develop our own strategies toward agreement on answers to these questions or, if we wished, even create new questions. We had ownership of our task and trust and respect among group members, whether they were members of the small discipline groups, the small interdisciplinary groups or the large group to which we returned to discuss small group findings. Everyone's opinion and experience counted equally. Everyone really listened to everyone else. Our tasks were important and significant to us. We could easily see their relevance to our own lives; they were, in essence, real life learning. Interspersed throughout our group discussions were times set aside for individual reflection and writing. These response times gave us the opportunity to process all that we had heard and thought and to integrate this information into already held beliefs. Writing down our thoughts forced us to clarify and support our opinions.

Such an educational process or journey begins, as Buddha understood, in confusion. "At first, the lack of direction bothered me, but I do feel it was critical to our conclusions coming from within ourselves. Also it models the value in this kind of activity both for professional educators and for students." There were many questions after Day 1 as to where we were really headed and if we should have more directives. But as we began to know

each other better, as we began to reach into ourselves and into our experiences for greater depth of understanding, ideas emerged and combined and changed and grew. . . Opinions began to coalesce, and enthusiasm for challenges and changes flickered.

"I experienced a whole range of feelings—overwhelmed at times, excited at the possibilities for change, admiration for the dedication affirmed by my colleagues and confirmed by my own commitment."

We left our final two days at Rensselaerville appreciative of these moments in our lives. "I appreciate the opportunity I've had to be enriched, encouraged, recharged and inspired!" We wish to thank our Seminar sponsors: CASDA, Key Bank NA, Golub Corporation, Charles Freihofer Baking Company and Capital Newspapers. The Select Seminar granted us the privilege to step out of our lives for a brief moment. . . to share in a special place and time the joy of learning with others whose opinions we value. . . and perhaps most important, the seminar reminded us of how good it feels to pause in our headlong rush through bells, mandates, Regents exams, and office memos. . . to pause and think about what we are doing and why we are doing it. We teachers learned once again how good it feels to discuss and reflect upon a subject for which we have a passion. . . and is this not what the journey of education should be?

Toward Academic Excellence:

Science

"Why do I need to know about electrons and protons? How will this help me in my daily life?" When high school science teachers face questions such as these, education is failing to make clear how important a knowledge of science and technology is to fulfilling the role of citizen in today's world. This year's CASDA Select Seminar provided the opportunity for science teachers to meet and address this and other critical issues.

The level of science abstraction has become extremely high in current high school courses.

The science group discussed several points relative to the nature of what teaching science means today. The level of science abstraction has become extremely high in current high school courses. Learning Regents science means comprehending complex topics from the duality of the nature of light or quantum mechanics to the components of contemporary nuclear reactors. Today high school science has much of the content of yesterday's college science. This level of abstraction, combined with Comprehensive Assessment Report pressure from central administration, forces teachers to become content specific in their daily instructional process. Too often a science course is a success if a high enough percentage of students pass the Regents exam. The science group agreed that this measure is not good enough to produce students with skills and attitudes necessary to compete in the global village where they will mature.

Students entering the high school classroom have much on their minds. They work late hours and often get little sleep. Many have neither the motivation nor the energy to do homework. Others have parents who are hostile to the school and its curriculum and who discourage their children from preparing for classes. A few students even have children of their own for whom they must care.

Teachers have the task of opening their minds to a language and a discipline clearly delineated in the teacher's experience, but foreign to these students.

All of these students walk into science classrooms each day. Teachers have the task of opening their minds to a language and a discipline clearly delineated in the teacher's experience, but foreign to these students. Such obstacles outline the reason and necessity for teaching the whole child rather than just covering science content. Teachers must have the perception to see their students' social difficulties and deal with personal and moral issues. Today's teaching environment requires a network of support staff both to assist students and to prepare teachers to recognize and deal with student needs for many kinds of learning.

Science is a subject best mastered by "doing" on a regular basis. This means that the practice students experience when manipulating concepts must be sufficient for them to internalize those concepts into usable knowledge. Usable knowledge can be applied in an active process of organizing information into a meaningful framework for viewing the world. This application level of science teaching must be a primary goal of science teaching.

In order to apply science knowledge, students need to acquire specific skills both inside and outside the science classroom.

In order to apply science knowledge, students need to acquire specific skills both inside and outside the science classroom. Many of these skills apply to work experience, to future education, and to careers. Some of them are promptness, dedication to task, team participation, and self-sacrifice. Highest among these skills are the abilities to work with other people cooperatively in the work place and to communicate clearly in oral and written form. Science teachers should encourage students to write, speak, analyze and interpret their findings in varied ways.

Students need the opportunity to engage in tasks with practical applications in order to integrate science into their lives. One example of an appropriate project focused on solid waste as a joint social studies and science unit. Knowledge of recycling procedures and fundamental principles, coupled with active political participation in changing local waste collection and

disposal practices, helped make science a part of student social consciousness. Activities such as this do not fit easily into forty-minute periods. Restructuring the school day may be crucial to stimulate a level of involvement that helps students grow into a science and social studies ethic needed in the future.

Restructuring the school day may be crucial to stimulate a level of involvement that helps students grow into a science and social studies ethic needed in the future.

Perhaps the greatest need in science education was expressed by one seminar participant who was having his home excavated. He asked the construction foreman about the nature of his help. The foreman answered, "You don't teach people how to think on their feet." This observation identifies a critical weakness in our present educational system—that is, our students have become passive learners instead of engaged problem solvers.

Most of the students who pass through high school science courses will never use the specific content in their careers, yet they will need to use their minds. Science should turn minds on to the possibilities of diverse ways of thinking about the world around us. Students must learn to confront problems rather than avoid them. Too many students see a problem, quickly decide that they cannot do it, and then wait for a teacher to show them the solution. Science teachers need to encourage novel approaches to problem solving and to give students the freedom to fail and thereby to learn from their mistakes.

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When problem solving is a goal of science instruction, more content means learning less. Expanding the content area of the curriculum becomes a self-defeating process when the goal of science instruction is broad. We submit that the solution might be to reduce content and increase emphasis on thinking skills and practical application of scientific knowledge.

The science group considered carefully the impact of evaluation on the science program. We expressed mixed feelings concerning the Regents examinations. We did, however, agree on some critical facets of science evaluation.

More writing must be included in science evaluation and science courses.

More writing must be included in science evaluation and science courses. If a major, future need is for citizens with increased communication skills, then science should be a part of the process to encourage student growth in speaking and writing ability. Too many students categorize themselves as amenable to only one academic area. Many science students fail to recognize the need to communicate clearly. Science teachers should incorporate more oral reports, essays and descriptive answers into their evaluative procedures.

In order to do this well, science teachers will need time to collaborate with English teachers on writing strategies and processes. In many cases, science teachers may need training to infuse writing into their curricula. Collaboration with teachers in other academic areas could lead to holistic remediation for students with limited communication skills instead of relegating this responsibility to remedial reading and writing teachers. Perhaps remediation specialists could emphasize reading in the content areas and use materials provided by the science department to make remediation a function of a skills building team. Perhaps all departments could agree upon a Communication Building Curriculum in order to assist students in gaining skills vital to future success.

Evaluation should also receive greater emphasis in teacher preparation courses.

Evaluation should also receive greater emphasis in teacher preparation courses. Preparation for science certification must stress development and analysis of a variety of evaluation techniques. If cooperative learning, holistic learning and critical thinking are to be emphasized as components of a thinking science curriculum, then teachers will need to know how to evaluate these components.

A primary tool of science evaluation in New York State is the Regents examination. The science group agreed that Regents science exams need greater flexibility. Students learn through many modes. They need to show mastery of science course work in more varied ways than just by passing multiple choice examinations. Since science has a language of its own, writing skills and manipulation of scientific ideas should be part of the final assessment of

Since science has a language of its own, writing skills and manipulation of scientific ideas should be part of the final assessment of course progress in science.

course progress in science. Whatever the state tests, teachers will teach. If the final assessment of a course centers on knowledge level questions, then the students are being robbed of the opportunity to experience analytic or synthesis level success. It is time for the State Education Department to exert its power of leadership by broadening its form of evaluation and thus stimulating curricular growth in the science field.

Many alternatives to the current examination format exist. Optional written essays could be incorporated in Part II of science Regents. Students could show their work in solving mathematics problem solutions as is done in Sequential Math Exams. Written lab reports could be based on procedures and sample data provided for analysis. This would test analytic and communication skills. Students would attempt open ended lab problems and create experiments to solve such problems. Pilot programs throughout the state would provide a means to evaluate alternative testing procedures.

In fairness to State Education Department (SED) science personnel, such creative evaluation approaches necessitate staff with time to begin to monitor these tasks. SED could assist the Science Bureau by fully funding the existing lines of personnel so that the Bureau can lead the people in the field rather than be forced to follow. Adequate staff could gather data to evaluate the effect of the Elementary Science Program Evaluation Test and its current curriculum changes on student attitudes, enrollment, and achievement. Perhaps SED could lead in the assessment of the role of the laboratory experience in student understanding and enthusiasm. With adequate personnel, the Science Bureau could speed up the process of curriculum revision to incorporate societal changes resulting from an information age where knowledge doubles so quickly in any content area.

Toward Academic Excellence:
Mathematics

The headline shouts at us, **"REPORT SAYS MATH TEACHING IN U.S. NEEDS AN OVERHAUL."** Below, in bold print it says, "***The experts say American students 'are being left behind'.***" After five days of intensive discussion over a period of four months, mathematics teachers participating in this seminar generally agreed with this popular press assessment that there are significant problems in the teaching and learning of mathematics in this country.

Despite dedicated efforts, mathematics teachers worry that students remember little of what they are taught and are unable to figure out anything that is even slightly complex. "Students just don't have problem solving skills any more." Science teachers complain that they have to teach whatever math the students need for science because math teachers don't teach anything useful.

Despite dedicated efforts, mathematics teachers worry that students remember little of what they are taught and are unable to figure out anything that is even slightly complex.

Students frequently ask, "What use is this stuff anyhow? Where are we ever going to use this in real life? Have you ever used it outside the math class?"

Parents say that they weren't ever any good at math; they don't really need it for their job and ask, "Why do you teach this stuff anyhow?"

Administrators want to know why SAT scores continue to decline and what the teacher can do to improve Regents exam scores. Employers complain that high school graduates do not have the necessary math skills to do their jobs effectively and are setting up their own schools to teach employees critical skills. College professors complain that students are lacking in the skills needed for college study and that they must teach remedial mathematics before students can tackle *real* college work. Reporters, writers and other self-appointed experts continue to publish such criticism and more in newspapers, magazines and on *special white paper* television programs.

Too few high school students have problem solving skills or are able to use numerical information to formulate problems. The real school mathematics curriculum is determined by the mathematics section on the SAT test, by the New York State Regents exams, Regents Competency exams, and other standardized tests. These are largely short answer tests which evaluate students' knowledge of content and not their ability to use mathematics to solve problems. Since students are examined on their ability to regurgitate content, teachers are held accountable for students knowing that content.

Too few high school students have problem solving skills or are able to use numerical information to formulate problems.

The participants in the 1989 Select Seminar accept the need for statewide curriculum standards and for evaluation of student performance measured against those standards. However, we believe the emphasis should be on process and not on content. The State Education Department needs to support its emphasis on problem solving in the curriculum with test questions that evaluate students' problem solving skills. Furthermore, the Department needs to critically reevaluate the curriculum with the goal of removing many topics that are of little use or interest to most students. We recommend that students be able to use calculators on New York State Regents Exams. We further recommend that the tests be administered at various times during the school year so that teachers have the flexibility to teach students at different rates. Because students learn mathematics at widely different rates, we believe the practice of separating students into different ability levels must continue in order to provide both an adequate level of support and challenge for all students.

We further recommend that the tests be administered at various times during the school year so that teachers have the flexibility to teach students at different rates.

The high school mathematics curriculum is not a growing, dynamic, changing curriculum despite the fact that much of mathematics has been discovered since World War II. There has been little change in the way that mathematics has been taught over the past generation despite the invention of the handheld calculator and the personal computer which have dramatically altered the way in which mathematics is used. Students see mathematics as a set of immutable facts, formulas, and algorithms which must be memorized. We believe that, given time, inspiration,

motivation and support, teachers can actively engage students in exploration and problem solving activities using mathematics. In order to learn new teaching techniques and new discoveries in mathematics, teachers must be given ample time and funds to attend conferences, take courses, visit other schools, and take advantage of other professional growth experiences. Teachers need time to work with each other to explore both content and pedagogical issues. We recommend release time during the school year and paid time outside the regular school year for teachers to explore new ideas and techniques. We encourage teachers to work together and to support each other in trying new methods. Teachers must have varied assignments both in terms of ability levels of students and grade levels. These assignments should change periodically.

Teachers must have varied assignments both in terms of ability levels of students and grade levels.

There is much vocal dissatisfaction with the teaching of mathematics. Many believe that much of what is taught is not useful to the vast majority of the population. Indeed, a nationally syndicated columnist recently declared that most people need nothing more than arithmetic in their jobs. On the other hand, there are those who claim that students are not prepared adequately for either jobs or further study. Then there are students who graduate from college with an excellent mathematical and scientific training who are unable to find jobs which utilize their skills. Understandably the mathematics teacher is confused. Are we teaching too much, too little, or simply the wrong things? We recommend the initiation of a dialogue among teachers, parents, students, college educators, and employers to determine the mathematics needed by students to function as well trained workers and effective members of society. There has been much confusion recently as to whether the perceived decline in student mathematical ability is the result of the lack of content knowledge or the lack of problem solving skills. We believe such a dialogue will highlight the need for greater problem solving skills and the need to include the use of technology in mathematics learning at an early age. Handheld calculators should be used in all mathematics classses at least as early as fourth grade, and probably earlier.

Additionally, we believe that some topics should be removed from the curriculum because they are no longer important for many and that there are new topics that

Handheld calculators should be used in all mathematics classes at least as early as fourth grade, and probably earlier.

should be added. We should initiate a dialogue with the spirit that the content of mathematics is secondary to the process of *doing mathematics*. Students who understand how to *do mathematics* can always learn new content when needed, but those who have only a knowledge of some content will be able to make little use of it and will often be unable to learn mathematics on their own.

The teaching of mathematics takes place almost in complete ignorance of the needs of other disciplines. Teachers of science, business education, art, home economics, technology, economics and social science often wonder what mathematics teachers are teaching since students don't seem to know much about the mathematics needed in those subjects. The departmentalization of disciplines and consequent compartmentalization of subject matter knowledge has led to the isolation of teachers from one another. Too much of what is taught in mathematics is useful only in mathematics and too often those mathematics skills needed for study in other subjects are not taught at all in high school mathematics courses.

The departmentalization of disciplines and consequent compartmentalization of subject matter knowledge has led to the isolation of teachers from one another.

We need to consult frequently with our colleagues in other disciplines. There needs to be a change in the high school departmental structure and a movement towards the development of interdepartmental teams. Our suggestions for this change ranged widely, from simple teaming to the actual elimination of mathematics as a subject. In the latter proposal, mathematics specialists would function as consultants to both teachers and students and would help them to develop the mathematics skills needed to carry out study in other subject areas. We agreed that there was no one single model that would be best for all schools, but that all schools should initiate discussion of interdisciplinary teaming with groups whose membership includes teachers from all disciplines. Individual schools should make decisions on the appropriate role of the mathematics teacher within the teaming structure.

We agree that the statements which follow describe the essential mathematics learning that all students should have when they have completed a high school education. These principles should guide all mathematics teachers, curriculum writers and high school administrators. Teachers should keep these goals clearly in mind as they plan lessons, develop activities for students, and work with students in the classroom. Curriculum writers need to develop programs, units and pedagogical approaches that reach toward these goals. Administrators need to work with their staffs to develop team structures which will help teachers to reach these goals. Administrators need to support teachers as they take risks and try alternative approaches to these goals.

Individual schools should make decisions on the appropriate role of the mathematics teacher within the teaming structure.

Upon completion of a high school education all students should be able to do the following:

1. When dealing with mathematics problems, students will know which operations to use and be able to carry out those operations by hand or by calculator. Students should have the ability to recognize whether or not an answer is reasonable.

2. Students will be able to understand the implications of numerical data and to make informed decisions as citizens, consumers, or employees.

3. When faced with an unfamiliar situation, students will be able to collect appropriate information, organize it, analyze it, and produce reasonable conclusions.

Toward Academic Excellence:

Social Studies

People living in our age may conclude that history is without meaning. There is a child in a Woody Allen film who will not eat. When he is asked why, he answers, "Because in a billion years, the sun is going to expand into a giant red ball, and the earth will be destroyed." When the doctor answers that will not happen for a long time, his response does not satisfy the child. When we, as teachers divorce history from a holistic, interdisciplinary perspective, we can not answer any child who asks, "Why study this?" We teachers must seek the essential elements of social studies that all students should understand, and ask will these elements help students come to an understanding of what is happening today and how that compares with the past? Can we help students synthesize the essential elements of history into a perspective that will help them become good decision makers?

We easily agreed that a common core curriculum should focus upon concepts that will aid students to think for themselves.

The social studies teachers of the CASDA Select Seminar began their discussion by addressing these major questions. We easily agreed that a common core curriculum should focus upon concepts that will aid students to think for themselves. Such concepts include: justice, empathy, human rights, global interdependence, conflict and conflict resolution, government forms, geography, and social, religious and political history. We emphasized that history should have a special relevance for adolescents who are trying to relate their past to their present and thus these core concepts should be carefully connected to the students' lives. Once we had identified a core of learning for social studies, we began to examine our present strategies for social studies education. Are there better ways of educating to these core concepts and skills?

At present, we teach social studies and other disciplines in fragmented 45-minute sections. Our students learn each subject in an isolated manner. One teacher reported a student's recent comment, "I learn history in unrelated

pieces. I would understand the whole picture if I could study art, music, literature, scientific thought and social elements of a certain time together. Why can't we learn in this way?" The student's question is a valid one. Our group agreed that with the increasing information and abstraction in our society, we must teach students to synthesize and share. We began to look at the concept of interdisciplinary teaching more carefully. We thought that the more interconnections students can make, the better their understanding and retention level will be.

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We agreed that teachers across disciplines should meet on a regular basis. The primary goals of such meetings would be to discover areas where we can reinforce common content utilizing common terms, and to show students that learning is not a series of isolated events but an interconnected process. Such a situation will foster enthusiasm and thus a more effective learning process.

If this interdisiplinary approach holds so much promise, then why don't we stop talking about it and act? We asked this question and confronted a common perceived obstacle. The current courses of study and examinations created by the New York State Board of Regents constrain us. The examinations are too content driven, unlike the English examinations which are more generic and open ended. Another roadblock we experience is that the state makes little attempt to differentiate regulations and activities by impacted, school population. The examinations assume that everyone learns the same amount of material within the same time period. We feel that the RCTs are attempts to remediate problems that some districts do not have. Why force all districts to comply with this standard? We futher assert that the Regents examinations and the RCTs restrict team teaching and hinder interdisciplinary approaches.

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Many of us have come to believe that "less is more." For example, we may wish to give more time to certain issues that students find particularly relevant to their lives, but we are locked into covering the entire curriculum by the June examination period. We are, in essence, forced to teach to the exam. The content focus of the Social Studies Regents Exam does not lend itself to problem solving strategies. Neither does it measure the active participation of students in government. Nor does it examine the relationship of school work to the students' everyday lives. Many of us feel that dictating content militates against a critical thinking, problem solving approach.

Another hindrance to interdisciplinary learning is time. School districts must provide teachers with the time necessary for interdisciplinary discussion and planning. This time must be granted during the school year as well as during the summer months. Perhaps more time would be available if districts could promote the professional scope of teaching through a reduction of non-teaching duties. At the same time, districts could encourage teachers to become involved as mentors/advisors/ counselors in community service activities thus providing models of social responsibility for the students. Such changes in the time utilization of teachers would help redefine teaching as a nurturant rather than a confrontational profession.

School districts must provide teachers with the time necessary for interdisciplinary discussion and planning.

We believe that it is part of our responsibility as social studies teachers to foster good citizenship on a global basis. It is not enough that we as teachers model community service action, we must insure that students experience such action themselves. Therefore we propose that all students graduating from high school in New York State complete a cultural immersion project outside the context of the school environment. Such projects might be cross cultural, economic, political, age or social barriers. For example, a suburban student might choose to work with the intercity homeless; an urban dweller

might choose to spend time working on a farm. Projects could also encompass interage problem solving teams that investigate and propose solutions for local community issues.

Therefore we propose that all students graduating from high school in New York State complete a cultural immersion project outside the context of the school environment.

The social sciences encompass all human experience over anthropological time. We cannot begin to address all of the issues and events in the compendium of human experience in our social studies curriculum. Thus selections must be made. Currently the SED and the Board of Regents make these decisions through syllabi and testing. We propose that the emphasis for such syllabi and tests be process rather than content oriented. Such a state focus could insure that students have the opportunity to develop the skills necessary for their intelligent, literate participation in a democratic society. It would also grant teachers, administrators, students, and parents a voice in the curriculum. Such ownership and cooperative effort could not fail to make the subject matter more meaningful and relevant to all those involved in the process. Is this not what social studies education in a democracy should emphasize?

Toward Academic Excellence:
English

We looked at English education at the secondary level in New York State and noted many positive aspects. The secondary English curriculum is flexible and process-oriented in many ways. Statewide exams such as the Regents and the reading and writing competencies do not flood English teachers with specific, detailed content requirements. Emphasis upon critical thinking and problem solving skills is intrinsic because of the writing process, in itself an effective thinking strategy. Despite such positive aspects, we agreed that English education could benefit from a close examination. Students in today's society live in an atmosphere flooded with fragmented information. An international incident is reduced to a thirty-second spot on a news broadcast. Computers and fax machines fire data around the world in minutes. Condensed notes hawk the skeletons of literary classics. The overwhelming mass of fragmented details distances human experience to the point that students can no longer make connections among experiences. "Why should we have to write? This is science!" Such an attitude deprives students of the ability to synthesize their learning into meaningful concepts and fosters their sense of isolation. Education must focus on the student as a whole being.

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Our Greek ancestors modeled this *idea of educating the whole student* centuries ago. They recognized that good questions are more imperative to education than good answers. Questions that stimulate critical and creative thought help the student develop an ability to discern and synthesize information while illuminating a process that translates as the essence of a democratic society.

With this *holistic* perspective in mind, we began to discuss issues of concern to us as English teachers at the secondary level. We agreed that the English Regents Examination has both positive and negative aspects. Since it is a broad spectrum exam, it does permit wide flexibility in choice of subject matter and therefore does

not place content restrictions on the classroom teacher. It also requires concentration on important skill areas such as listening, reading comprehension and vocabulary awareness. On the other hand, we noted that sometimes teachers and classes spend an inordinate amount of time on Regents preparation. Our goal, in the final analysis, is that students develop the view that learning is a lifelong process with lifelong value, not a short term struggle designed to satisfy minimum standards. Therefore we suggest that the Regents Examination in English continue in essentially the same format, but that the English Regents grade be only one of several evaluative measures of student success.

We therefore advise that the academic discipline of English contain few, if any, required works.

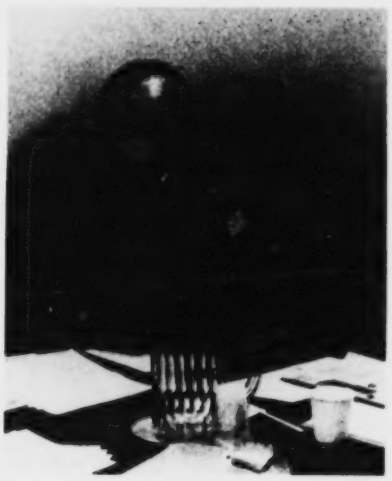
In contrast to our colleagues in other academic areas, we saw ourselves fortunate in that we do have a flexible curriculum. It is, however, still more rigid than we feel appropriate. The use of anthologies contributes to this rigidity. Considerable monies are invested in equipping every class with the same series, and thus the prescription is neat, the content solidified. But by confining literary choice to the selections of the anthology editor, these anthologies hinder student/teacher empowerment and traditionally neglect controversial issues and minority works. We therefore advise that the academic discipline of English contain few, if any, required works. Teachers and students meeting with administrators, parents, and community should select the works studied with consideration for other curricula and foci in their particular school and community.

We also agreed that the structure of the present school system contributes to the fragmentation of literary content.

We also agreed that the structure of the present school system contributes to the fragmentation of literary content. English teachers often teach a particular work because it can be read in 45 minute segments. Our method of teaching is likewise limited by strict adherence

to short, fragmentary periods. For example, 45 minutes is not long enough to read even a very short story, compose and share thoughtful responses. Therefore, it is nearly impossible for students to share initial reactions to literature. Generally, in English, we believe that longer blocks of time would promote richer, deeper learning experiences. A flexible school structure would allow each discipline optimum learning conditions.

Thus, we embrace the concept that teachers must write and share with their students, modeling the process, both frustrating and satisfying, that accompanies effective writing.



Writing is integral to every facet of education, for writing demands consideration of options, development of criteria by which to measure these options, and selection and presentation of solutions. It helps a student clarify and recognize what he does understand. Even though we fervently believe that writing should be a principal facet of every academic discipline, we recognize that English teachers have been and will continue to be considered the "experts" in the teaching of writing skills. Thus, we embrace the concept that teachers must write and share with their students, modeling the process, both frustrating and satisfying, that accompanies effective writing. Writing process involves teachers and students writing, revising and sharing, and this can take place only in small, intimate situations. A class size of no more than twenty students is an absolute imperative. We further recognize that development of word processing skills fosters understanding and application of the writing process itself. We therefore recommend that word processing be integrated into every English course and into all other disciplines as well.

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All teachers, but especially those of us in the field of English, must be conscious at every moment of the value-laden nature of their content. English weaves intrinsic connections to all areas of life, thus providing unlimited possibilities for creative and inspirational educational experience as well as a frightening responsibility to protect the individual integrity of every student. Students have a right to teachers who present many viewpoints and who meticulously strive to be fair and non-judgmental in their presentations of the subject matter.

We therefore recommend that this student right and teacher responsibility be a key emphasis in English education preparation.

As we looked longer at ourselves, we realized that we English teachers are generalists. Reading, writing and speaking, the skills upon which English teachers focus, are inseparably bound to the thinking skills and problem solving abilities required across all disciplines. As generalists, we assist our students to write lab reports, verbalize math problems, conduct historic research, and respond to art, but we can not do this effectively in a structure where teachers are isolated from colleagues. We need the opportunity to dialogue with our colleagues across all disciplines. Such interaction must be structured into the school day on a regular basis; it cannot be accidental or casual.

We recommend that English teachers take the lead in promoting interdisciplinary learning situations.

As communication is visual and auditory, written and spoken, English teachers have the opportunity and obligation to consciously respond to the variety of learning styles students possess. English teachers should be familiar with model programs that integrate the visual, musical, written, and dramatic arts. They should receive the support and training necessary to implement appropriate programs in their classrooms. Such programs promote the interconnectedness of life experiences. Disciplines are, in fact, different perspectives on a common phenomenon. For example, the world can be described by the poet, the historian, the chemist, the mathematician. We recommend that English teachers take the lead in promoting interdisciplinary learning situations. Intrinsic to this proposal is structured time for teachers to meet, discuss and plan. Understanding the priorities, viewpoints, strategies and actual classroom procedures of colleagues is absolutely vital to an interdisciplinary activity, but we think that such sharing is critical in any educational situation. Time and space for such communication must be built into the daily school structure. Participation in this seminar experience illustrates the inspiration, energy, and practical application that grow from time spent dialoguing with colleagues. Such time must never be a luxury, but a necessity.

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We suggest that thoughtful pursuit of student and teacher choice rather than mandated subject matter may initiate a natural spiraling out process so that in-depth study of a certain area would reach into several academic areas and become interdisciplinary in a natural process. Such a process models the procedure of living in general. Human experience is multi-sensory, and it is incongruous to learn about that experience in highly discrete units. Since students would choose to participate in such an area of study, grouping would be by task rather than by age or ability, an organizational system we prefer.

As we allow the student responsibility for choosing his learning, we begin to change the traditional teacher-student relationship. Our experience in writing our assignments with our students shows us that shared learning fosters great enthusiasm and energy for learning. It also gives students accountability for their learning and offers them a model of growing from failure as well as from success. We suggest that English teachers promote a cooperative atmosphere in their classrooms by thinking of themselves as "coach" or "facilitator" rather than as dictator. By modeling a "teacher as co-learner" approach, we help students understand the underlying processes of our society. Can we really in good conscience do otherwise? Should we be modeling a dictatorship when we pledge allegiance to a democracy?

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Related to all of our suggestions for English education is our belief that teacher training must begin with the expertise of master teachers. We must take care to encourage future teachers to develop such attributes as the willingness to take risks and the ability to listen. Districts should also allow teachers to continually participate in professional growth activities, no matter how many years of teaching they accrue. Likewise, any administrator who takes on the task of evaluating teachers should still be a participant in education at the classroom level. Perhaps all teachers and administrators should even be periodically required to "take" a course

outside their disciplines as regular students in their secondary school. Such willingness to share learning on an equal basis grants significance to the learning for the younger students and reminds the adults of the joys and frustrations implicit in the role of "student." Certainly this practice fosters a fertile sense of "a community of learners."

Although we addressed ourselves to English concerns, we came again and again to the conclusion that the optimum conditions for the teaching of English require sweeping changes in the structure of the school day and year. We endorse an interdisciplinary team structure for secondary school. We would begin by changing the focus of state mandates from content to process and then redefine our decision making processes to allow the interdisciplinary team of teachers together with administrators, students, parents and community to restructure school schedules and curricula to reflect the best interests of the whole student. Teachers and students could thus present for the rest of society a model of people who interact cooperatively toward a common goal.

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Toward Excellence:
Restructuring the Secondary

All of our observations, discussions and recommendations led us to the conclusion that the structure of American secondary schools must change to enable the focus of learning to shift from superficial, didactic coverage to thought provoking, interdisciplinary learning. After reading articles, listening to speakers and discussing innumerable options, we concluded that there are many viable answers to the restructuring questions. We agreed that school communities must find their own answers by committing to the creative process our seminar represents. We do, however, wish to recommend several restructuring components that we feel are critical to excellence in education.

For students to think and live in the real world, they need to experience it in their daily environment.

New York State mandates a rigid time schedule requiring a fixed number of minutes for each course to meet each week in order to receive state credit. This stands in the way of scheduling for stimulation of creative students. The world our students face in not blocked into time frames where adults think about social studies separate from science and technology. For students to think and live in the real world, they need to experience it in their daily environment. In some way, the rigidity of the modern high school must allow overlap of content areas and integration of education concepts in order to promote holistic learning.

Outdated economic factors still govern the length of school days and years. We must introduce flexible scheduling that will encourage districts to develop and experiment with creative schedules. Perhaps State licensing boards could encourage districts to create magnet schools for a thinking curriculum. Here the focus would not be specialized content areas learned in isolation, but development of thinking skills. Students would be actively solving problems, grappling with issues, preparing quality productions, producing useful products and applying themselves to other critical issues. If such

School

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groups as state funding bodies, the Federal Excellence in Education program and the Middle Atlantic States Association of Schools, sought out and recognized schools with effective programs, these programs could be emulated across the country. Perhaps they could recognize schools for "Excellence in Educating Students in a Thinking Curriculum." School districts could then use this award to convince their boards of education to commit to restructuring.

We submit that the central tenet for restructuring must be the organization of students for purposeful projects. Teachers and students must have the time and flexibility to devote themselves to a common interdisciplinary task. Mandates must be minimized to encourage reading, writing, experimenting, thinking, discussing, and producing without the limitations of a forty-minute period or a 180-day school year.

If American students are to be leaders of a positive future, they must participate actively in the present. They can not sit passively putting in time while the teacher "covers content." They must select facts and concepts from the mass of information available and synthesize them into patterns meaningful to their own lives. We cannot and should not be doing this process for them. Over and over again the teachers in our seminar stressed the absolute necessity for more time. America is a land in a hurry. We must give our students and ourselves the time and the opportunity to experience the responsibility and the joy of learning.

And to do this. . . we must first restructure our own innate concepts of what education must be. We must be willing to give up a little of our own selves, of the sacred core of our subject matter, and of education as we experienced it. We must let go of ourselves a little. Then and only then, can we restructure education in a way that fosters a rich and profound, life-coping experience.

The Process of Excellence:
An Instrument for Effective

We believe that Excellence in Education **is a process** and not a static culmination of a process. Furthermore we believe that the process used in the CASDA Select Seminars provides a model for schools to follow when they wish to undertake a school improvement program. The essential elements of this process assume that the participants are the experts and what they say is meaningful and important. The participants are given time to meet away from their regular responsibilities in a pleasant, comfortable environment. They know from the beginning that the results of their deliberations are important and that others will listen to them.

Furthermore, we believe that the process used in the CASDA Select Seminars provides a model for schools to follow when they wish to undertake a school improvement program.

There is no single process that will work for all schools and there is no one solution that will result in excellence in education. Each school will need to work out its own excellence based on the varied conditions present. It is necessary for the school leadership to make the commitment to the conditions integral to the process. As we in the Select Seminar sought ways to encourage excellence in education, we came to focus on **process** as the essential element of a student's education. Phrases such as problem solving, critical thinking, holistic thinking, interdisciplinary education, and teacher as model/coach came to represent the ideas that we felt were the most important elements of the best education. The question remained. . . how does a school work its way toward a structure or curriculum that enables students to learn these processes?

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Change

First, some members of the school community must sincerely feel and express the need for change. They may include teachers, students, administrators, or community members. Someone in an authority position must appreciate the feelings of these people and enable them to have the time, space, and environment to meet and discuss the issues. A loosely defined theme will initiate the discussions, but the theme may change and evolve to some other, probably broader, idea. All involved must clearly understand that the participants in the meetings are there on an equal footing and that the results of their deliberations are valued and will be an important part of the decision-making process of the school.

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The participants should be freed from their daily responsibilities to take part in the deliberations of the group. There may be many formats for meetings. Some possibilities are day-long sessions in a pleasant setting; regular meetings during the normal working day (enabled by release time); or paid summer or vacation time. Participants must be free to concentrate all of their energies on the discussion. The meeting environment should be comfortable with meals provided and interruptions avoided. This kind of treatment signals an underlying message that the task at hand is an important and valued one. If there are many participants, they should be broken up into groups of approximately six. This will assure everyone the opportunity to participate in the deliberations. The sessions should take place over a period of several or more months with no pressure to come to early conclusions.

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Although there is no single pattern for the development of ideas, there seem to be some recognizable stages in the process. Participants' reading a book or article relevant to the issue of concern may serve to bring outside ideas for consideration and inspiration. At some time the participants may express frustrations with the status quo and do a lot of talking about what is wrong. Once the negative feelings are purged, the emphasis will shift to the ideal. Participants will talk about the way they think schools should be. Often the ideas will become quite radical and gradiose when people have the opportunity to dream. They get excited and inspired by the possibilities of realizing their fondest dreams. This euphoria may crash when the discussion turns to the impediments to the plans. At this time, participants must remember that low as well as high points are intrinsic to the creative problem-solving process. Significant ideas and contributions are often born from failure and recognized impediments.

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It is important to have the participants writing throughout the process. Writing yields a record of the group deliberations and helps participants to organize their thoughts and to reflect on the process. "Writing down ideas and recording what happens is important so people can look back over things and not have to repeat them. Also important is. . . forcing them [participants] to draw conclusions and figure out where they are."

"Writing down ideas and recording what happens is important so people can look back over things and not have to repeat them."

When the impediments become a serious problem, many people might believe that there is little or no hope of success and want to quit. A key step should then take place. The group facilitators or leaders should enable the participants to confront the impediments directly. In the CASDA Select Seminar, most participants felt, by the end of the second session, that there was little we could do to promote excellence because of the mandates handed down by the Regents Action Plan and the State Education Department (SED). At this point, the CASDA facilitators brought in representatives from SED, and the participants confronted these impediments. We discovered that there

model we proposed. We had fun. We learned. We were eager to learn more. We were invited to set aside our baggage. Conditions were such that we did it easily. We were greeted as individuals, accepted and respected without reservation. We were treated as professionals.

The CASDA Select Seminar concluded that education needed to be treated as a process, not as content to be presented in artificial 40-minute bites.

The CASDA Select Seminar concluded that education needed to be treated as a process, not as content to be presented in artificial 40-minutes bites. We felt that departmentalization creates artifical barriers to real learning and that teachers need to work in interdisciplinary teams and explore real problems without worrying if they fit neatly into any content area. We understood that our group could not provide the answers for other groups and other schools. The people in those schools must go through a process as we did and find for themselves their own truths, their own visions. It is the process that they use to explore excellence in education that will sustain them in the implementation and modifications of their dreams.

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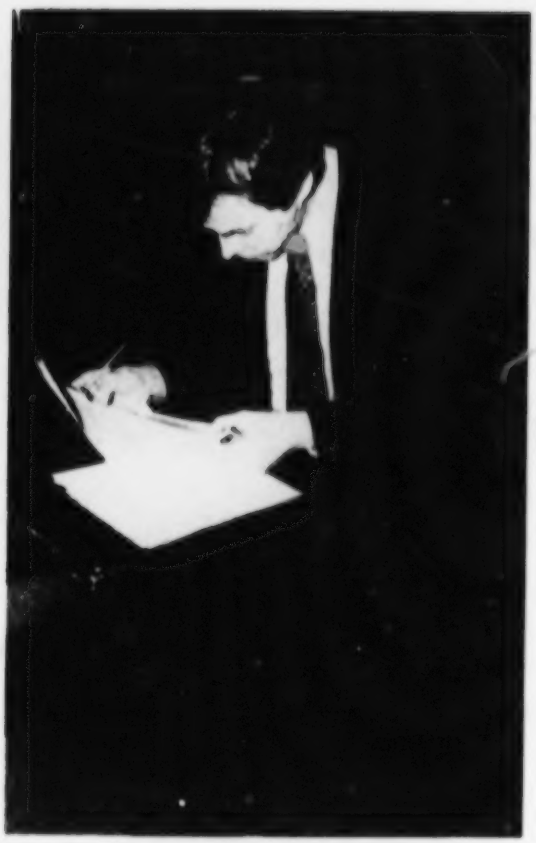
Afterword

The 1989 Select Seminar on Excellence in Education departed from the typical seminar process by inviting some experts to engage in conversations with the seminar participants. On the third day of the seminar, Friday, February 10, four representatives from the State Education Department joined the seminar participants from noon until 3:30 to talk about issues in academic disciplines.

We thank the following people for spending a half-day in February with the seminar participants: Roseanne DeFabio, Bureau of English Education; Coe Dexter, Bureau of Social Studies Education; Douglas Reynolds, Bureau of Science Education; and Frederick Paul, Bureau of Mathematics Education.



We also thank John Shine, Superintendent of Catskill Central School, for spending Sunday evening, March 13 with us at the Rensselaerville Institute. Dr. Shine shared with the participants his experiences with the Coalition of Essential Schools in Avon, Connecticut.

The task of synthesizing the conversations, discussions, and recommendations was assumed by Thomas Gavin, Stanley Mathes, Michael Nyhan, and Jean Rose. We are grateful to them for their work. In addition, we recognize Jean Rose for assuming the responsibility as overall editor for the report.